DEGREASING AND WASHING WOOLS

New Method Has Been Devised by Department of Agriculture.

WASH SAMPLES THREE TIMES

Results Obtained by Various Tests to Be Used in Mating Sheep in Attempt to Improve Fleece of Different Breeds.

(Prepared by the United States Department of Agriculture.)

In order to compare the grease and dirt contents of various wools and to improve wools in these respects, the United States Department of Agriculture has devised a new method for degreasing and washing dirt from samples. In the course of this work it was found that samples from the side of the fleece are best for the purpose as the contents of dirt and grease in this part are closely related to the average for the entire fleece.

Washed With Gasoline.

In the method for determining grease, as now used by the department, the samples are washed three times with gasoline, which is drained off through a filter paper that retains all foreign matter. It has been found that this treatment leaves only 0.17 per cent of grease in Rambouillet wool and only 0.28 per cent in wool of the crossbred sheep used.

Dirt is taken out of the samples by washing with soap and water. The wool is cleaned well if the water is at a temperature between 40 and 45 degrees C., which is not hot enough to felt the wool.

Aim to Improve Fleeces.

Results obtained by testing various samples of wool for grease and dirt will be used in planning the mating of

Wool Sorting—Grading Fleeces.

sheep in an attempt to improve the fleece in these respects.

Details of this experimental work have been published in Department Bulletin 1100, A Method of Determining Grease and Dirt in Wool, by D. A. Spencer, J. I. Hardy and Mary J. Brandon. Copies may be obtained by addressing the Department of Agriculture, Washington.

BIG VALUE OF FORAGE CROPS

Should Possess as Many Desirable Characteristics as Possible—Some Are Enumerated.

A forage crop to be of most value should possess as many desirable characteristics as possible, including (1) adaptability to soil and local climate, (2) palatability, (3) heavy yield of digestible matter, (4) narrow nutritive ratio, not wider than 1:5, (5) succulence, (6) long growing seasons with ability to endure tramping and grazing, (7) permanency, (8) reasonable cost and ease of seeding, (9) capability of quick pasturage at any time during the growing season, (10) leguminous characteristics.

LEGUMES IN IMPROVING SOIL

Thousands of Farmers Have Introduced Various Crops into Their Cropping Systems.

Over 350,000 farmers, according to reports to the United States Department of Agriculture, introduced legumes, principally soy beans, cowpeas, velvet beans, and alfalfa, into their cropping system as a result of demonstrations in the use of legumes in soil improvement given in 1921 by agricultural-extension agents.

POULTRY RAISED AT PROFIT

Farmer Has Little Knowledge as to Cost of Production of Fowls Sold for Meat.

Poultry meat is a by-product on most farms. The farm flock is supposed to lay enough eggs to satisfy the family and provide a balance to help out with the grocery bill, but when the birds are sold as meat they are turned off without much knowledge as to the cost of production. It is necessary to keep track of the feed that the birds use and know if they are paying a profit. There is no reason why poultry meat should not be raised at a profit the same as cattle and hogs.

PREVENTING CHOLERA IN VARIOUS STATES

Department of Agriculture Is Extending Control Work.

Farmers Will Save More Hogs and Avoid Disastrous Losses if They Do Not Delay in Reporting Suspicious Cases.

(Prepared by the United States Department of Agriculture.)

The United States Department of Agriculture this year extended its cooperative hog-cholera control work to South Dakota, Washington, New Mexico and West Virginia, making a total of 34 states in which work is being done in co-operation with state authorities. Co-operation among the different agencies is now at its best, and is therefore more effective than ever.

The object of the work with the various states is to prevent and control

One Way to Prevent Disease Among Hogs Is to Provide Good Sanitary Quarters—Hog Cot in Use at Beltsville Farm.

outbreaks of hog cholera and to prevent the spread of the infection and to reduce losses.

During the year, hog cholera has been kept well under control, but special care must be taken when there is an increase in its prevalence. Farmers will save more hogs and prevent disastrous losses if they do not delay reporting immediately to the state veterinarian, the county agricultural agent, the representative of the bureau of animal industry, or local veterinary practitioner any suspicious cases of sickness among their hogs. Hog-cholera serum is not a cure, but a preventive treatment, and should be applied as soon as possible when the disease appears in the herd or in the neighborhood. The preventive treatment is a good insurance against losses from hog cholera.

GREEN MANURING AIDS SOIL

Organic Matter Is Added, as Is Nitrogen—On Poor Land Turn Under an Entire Crop.

Green manuring means turning under suitable crops to enrich the soil. Such crops may be turned under green or when ripe.

Green manuring adds organic matter and, directly or indirectly, nitrogen to the soil.

Leguminous crops are most desirable for green manuring, since they add to the soil nitrogen gathered from the air in addition to the organic matter which they carry.

Besides the nitrogen in the legumes turned under, an additional supply of nitrogen is fixed in the soil by the action of bacteria, using the carbon in the organic matter as a source of energy.

Turning under an entire crop is advised only when the soil is poor and for the purpose of starting a rotation.

Turning under catch crops or winter-growing green crops is an economical and successful method of supplying nitrogen.

GIVE HARNESS BEST OF CARE

Hardened Grease Is Conveniently Removed by Scraping With Knife—Oil While Damp.

Harness should be washed and oiled when it becomes dirty or extremely dry. For washing, use tepid water, a neutral soap, such as castile or white toilet soap, and a sponge or fairly stiff brush. Hardened grease is very conveniently removed by scraping with a dull knife. Rinse in clean, tepid water, and allow the harness to stand in a warm place until it is no longer wet but still damp. Then oil it and leave it in a warm place for 24 hours before being used. Harness should be oiled or greased while still damp; otherwise, it may take up so much grease that it will pull out of shape or take up sand and grit, which will injure it, as well as spoil its appearance. Harness should never look or feel greasy.

GRADED POTATOES ARE BEST

More Attention to Proper Handling Will Boost Price—Dirt Is Most Undesirable.

Potatoes properly graded bring a better price than the ungraded product. Whether stored or sold direct, the freer the crop from dirt the better. Provision should be made for ature of 45 to 50 degrees in the storgood ventilation and a steady temperage cellar

SMOKEHOUSE IS FARM ESSENTIAL

Late War Responsible for Revival of Old Custom of Farmers Curing Meat Supply.

CONCRETE IS MOST DURABLE

Good Type for General Purposes Is Shown in Illustration—Has Been In Use Three Seasons and More Than Paid for Itself.

The old-time custom of home curing meats, revived during the war has been given added impetus in the last few years and many farmers are actively engaged in preparing their surplus supply for table and sale.

There is no reason why every farm should not have a modern smokehouse and the resulting supply of well-cured meats on hand through the winter season. Prices for old country hams make it worth any farmer's time to lay in as big a supply as possible.

Solid Concrete Is Best.

Many types of smokehouses are in use, ranging from the old type of a barrel with one head knocked out to the most modern and pretentious affairs of solid concrete with double padlocked doors. The latter type is growing steadily in popular favor because of its many natural advantages. A concrete smokehouse affords permanency, protection, better quality products and has a big economic advantage through the fact that it is fireproof and requires no upkeep expense from one season to the next.

A good type for general purposes is shown in the accompanying illustration. The smokehouse has been in operation for three seasons and has more than paid for itself already with many more years of usage ahead.

It is built of concrete blocks with a wooden peak roof. Many other farmers, however, are building the roofs of

A Concrete Block Smokehouse—Smoking Sausage and Hams.

concrete as well because of the danger of burning the wooden roofing and the effects of severe weather on the boards.

A foundation is laid by excavating to a depth of two or three feet and setting a footing, 18 inches wide and 8 or 10 inches thick. Upon this the wall rests, starting with concrete bricks laid upon a firm mixture of cement mortar. It must be remembered that only as much mortar as will be used in an hour's time should be mixed at one time as it will "set" in less than that time.

Racks and hooks are provided for hanging the meat in the upper part of the structure so that the smoke will have free circulation during the curing process.

Experts in meat smoking hold that fresh green hickory chips are the best fuel for flavor and the market value of meat thus prepared will exceed that where ordinary methods are employed.

An added feature of this smokehouse is the fact that it is absolutely safe from the depredations of mice and rats and can be locked to keep out two-legged visitors.

GIVE HARNESS PROPER CARE

Mixture of Neat's-Foot and Castor Oil Is Recommended With Application of Grease.

Neat's-foot or castor oil or a mixture of these with wool grease is good for driving harness. For heavy harness use a mixture of any or all of these with wool grease to make a paste, having about the consistency of butter. Apply the grease lightly to driving harness and liberally to work harness. Rub the oil or grease, warm to the hand, thoroughly into the leather while it is still damp from washing. After the harness has hung in a warm room overnight, remove with a clean dry cloth the excess of oil which the leather is unable to take up.

LAND FOR ORDINARY FAMILY

Alfalfa, Garden Truck, Poultry, Pigs and Pasture Will Be Found Amply Sufficient.

Three or four acres of alfalfa, with an acre devoted to garden truck and another acre to poultry, and cow pasture, with a few cows, a hundred chickens, and three or four brood sows will support the ordinary family of five, with enough left over to pay taxes.

EFFECTIVE PLAN TO BETTER LIVE STOCK

Tried Out With Much Success in Many Tennessee Counties.

More Profitable Results Obtained From Community Sales Than Those Covering Larger Sections —Big Aid to Better Sires.

(Prepared by the United States Department of Agriculture.)

A method that should be found effective in improving live stock in all parts of the country has been tried out with much success recently in Tennessee, says a report to the United States Department of Agriculture. It consists of a series of county sales of purebred sires of all kinds.

The sales have consisted largely of beef bulls, dairy bulls and boars, although a few rams also have been included. The sales are advertised intensively in the counties in which they are held. Small advertisements and posters are used, and for some time

Registered Hereford Bull Used to Build Up Herd.

before the sale the local papers run articles on the value of purebred sires.

In that state it has been found that better results are obtained from the county sale than from sales covering a larger section or from state sales. Farmers are more apt to attend the sales where they can haul the purchases home or ship only a short distance. At a number of these sales the number of sires sold has varied from 20 to 60. One of the big advantages is that good blood produced in the county remains there and improves the general run of live stock instead of being scattered far and wide.

The department looks upon this plan as an important aid in the Better Sires —Better Stock movement.

PROPER CARE OF MACHINERY

Various Implements Should Be Kept in Repair and Breakage Reduced to Minimum.

Nowadays when a machine breaks it is not only the cost of replacement to be considered, but the machine may be out of service for several days or weeks because the dealer's stock of parts is low and completely out on some items.

And it isn't the dealer's fault, either, in most cases. He has orders in for short stock parts, but ordering is one thing and getting orders filled is something else, as all machinery dealers and their customers know to their sorrow.

All farm machinery should be kept painted. Reduce breakage to the minimum. Parts will break often enough when machines are handled with the utmost care, but just now, when replacements are so expensive and so difficult to get promptly regardless of price, the least the farmer can do is to guard against this unnecessary weakening of essential equipment, by allowing rust to set in on it.

PASTURES OF TILLABLE LAND

Erroneous Impression That Rough, Thin Soil Is Good for Grass to Feed Animals.

More pasture and better pasture is the paramount need on many farms where there are animals. There has been an erroneous impression that farmers must have rough, very thin or otherwise cheap land for pasture. The facts are some of the most expensive and most fertile land on some farms would pay better in pasture than in the ordinary field crops now being grown on it, simply because producing feed and harvesting and feeding is too expensive. Why not let the animals do their own harvesting and feed themselves, using crops that need no cultivation? It will pay on some farms.

CLUB MEMBERS AS FARMERS

Eight Boys in Minnesota County Become Successful—Producing Live Stock and Crops.

That many farm boys who enroll as club members in the production of live stock and crops become successful farmers is demonstrated in the case of eight young men living in Itaska county, Minnesota, who carried on club demonstrations from three to four years. According to a report to the United States Department of Agriculture four of them are now engaged in general farming, three of whom are growing certified potato seed, one is a dairy farmer, two are students at Minnesota College of Agriculture, and one is studying for the ministry

The Ambition of Letitia

By JANE OSBORN

(© by McClure Newspaper Syndicate.)

At twenty Letitia was a veteran houseworker, for she had begun working for the Dawsons when she was twelve, and had served a right apprenticeship under Mrs. Dawson for six years. Mrs. Dawson had died and, as Grandmother Dawson was by this time disposed to remain in her easy chair, the entire tasks of housekeeping had then fallen to Letitia. This meant doing the cooking, cleaning, washing and mending for the indolent Grandmother Dawson, Mr. Dawson the widower, and Tom Dawson.

Mrs. Dawson had called Letitia her "hired girl." She had rescued the little girl from the county poor house after the death of her widowed mother, though it may have been a ruscue more in name than in fact. Since Mrs. Dawson's death Mr. Dawson paid Letitia a meager wage, but one considerably greater than the pin money allowed by Mrs. Dawson.

It was as "Dawson's hired girl" that Letitia was generally known in the community. However, there was no special social line drawn between her and her employers. She sat beside the same lamp with them, reading or mending on winter evenings. She ate at the table with them, jumping up, of course, every few minutes to get fresh supplies from the kitchen.

It was one chilly evening in October. Grandma Dawson had retired and Letitia sat with her mending in her lap, while Father Dawson read the paper and Tom leaned abstractedly over the table where he was working out problems in his correspondence course in scientific farming. Several times Letitia had looked up, opened her mouth to speak and had then remained silent.

After three or four false starts she managed to say: "There is something I was wondering. I thought perhaps, if it was just the same to you, maybe now, since I'm getting to be older and all—that maybe you'd just as soon call me a housekeeper instead of hired girl. If you'd just drop it that I was the housekeeper then other folks would get the habit—"

Letitia looked up and for a painful moment her eyes met those of Tom Dawson, eyes that were flashing with indignation. Apparently embarrassed at meeting Letitia's glance, his eyes dropped and his tanned face reddened.

"I don't see why you should be so vexed with me, Tom, for asking," Letitia said, resuming her darning furiously.

"I wasn't vexed with you, Letty. I—but it doesn't make any difference, I suppose."

Mr. Dawson had been cogitating the situation. He ended by laughing and looking amused over his reading glasses at Letitia.

"So you want to be called a housekeeper, do you? Well for myself I don't see any difference between a hired girl and a housekeeper. No disgrace in either. What you been reading, Letty, to put such notions into your head?"

"Nothing," snapped Letitia. "And you don't have to do it if you don't want to. Only I want you to know that my folks were as good as any in the county. My father was a parson and my grandfather had as big a farm as this—and it would have been mine, too, if he hadn't sold it to buy bum oil stock, or something."

Letitia said she had not been reading anything to put new ideas into her head, but this was not quite true. Letitia had invested in a book on etiquette—an elaborate volume that opened up undreamed-of worlds of luxury and ceremonious living to her. She read it eagerly, and now she knew by rote the duties of butler, footman, lady's maid, first gardener, second gardener and the rest. She dwelt with especial interest on the paragraphs dealing with housekeepers.

They wore no aprons, were permitted to wear a silk dress in the afternoon, provided it was high-necked. They were addressed as Mrs. or Miss to distinguish them from regular servants, and they ate their meals in their sitting room—brought up on a tray by one of the maids. They carried the keys to the supply closets, had the hiring of less important servants, paid off household bills, kept guests and, where that work was not done by the butler, took instructions for meals from their employers.

Letitia's ambition was to be a housekeeper. She thought with satisfaction of herself as a middle-aged person in a stiff black silk frock, eating in solitary grandeur in her private sitting room. But she could not become so important a personage all in one day. She must work up to such heights. The rudiments of housekeeping she had learned from her service with the Dawsons. The flourishes she must learn by experience in more pretentious households.

She had definitely decided to go to the city and apply at an employment agency for a position as a housekeeper, in a less pretentious establishment than that described in the book to begin with. But she must be able honestly to say that she had been a housekeeper—not a hired girl.

Apparently she gained nothing by her petition to the Dawson men, difficult as it was to deliver. Mr. Dawson, Sr., simply hadn't taken her seriously, and Tom as usual answered in an indefinite sort of scared manner. Ever since he had been working on that correspondence course he had seemed preoccupied. Once several years ago he had taken her for occasional walks and had driven her to town, but apparently his ambition to become a scientific farmer left no thoughts for Letty, "the hired girl."

Letitia's darning needle flew back and forth as she sat by the reading lamp, and once a large tear splashed on one of Tom Dawson's heavy woolen socks that she was darning. She rose to retire when the clock struck half-past eight, and on some pretext or other Tom followed her to the kitchen, where she went to get her little lamp to light her to bed.

"I want to talk to you, Letty," Tom said, barely looking at her. "Stay in your room until father has gone to bed, then come down quietly."

Letty went about lighting her lamp and said only after a long pause. "All right, Tom, I'll come back."

A half hour later Tom and Letty met in the living room and Tom led the way to the little side porch where, though the air was chilly, they could talk with no fear of being heard.

"It's about your wanting to be called a housekeeper," Tom began. "I don't blame you not wanting to be called 'hired girl,' but father doesn't really mean to hurt your feelings. I'd have made matters different from what they are long ago if it had been any use trying. . . . Instead I made plans, and part of the plan was to take this course in agriculture. I came into that money from mother last spring when I was twenty-one. I'm going to finish my correspondence course and next winter take time to take the shorter course in agriculture at the State college. Father has agreed. Then I'll come back and buy a farm of my own; and when I do that—Letty, if you were Mrs. Tom Dawson it wouldn't be so bad as being Dawson's hired girl, would it?"

There was a trying pause and Letty kept her head turned from Tom's.

"Letty, I love you," Tom said with more bravery than he knew he possessed. "I know you have ambition and didn't want to be called a hired girl, but I've had ambitions too. I don't want to be an old-fashioned, blundering farmer. That's why I've worked so hard on that correspondence course. I want to marry you."

"But I'd have to love you—" Letty began.

"Don't you—a little?"

"I don't know. I'll have to think," said Letitia under her breath. "When I have had time to think things over I'll tell you. Good night, Tom, and thank you for—for understanding."

With that Letitia went back into the house and upstairs to her little room. For an hour she sat in her single upright chair thinking. Then she took up a pencil and wrote on a piece of writing paper.

"Dear Tom,

"I love you.

"LETITIA."

Then Letty unlocked a drawer of her bureau, took from it a book and started out of her room. She slipped the note under Tom's door and went down stairs. There she opened the stove that was closed for the night. She dropped the book on the coals and left it to smolder there through the dark hours.

HAVE EYES ALL OVER BODY

Nature Particularly Liberal to Some of Her Creatures, the Dragon Fly Noticeably.

There is a most astonishing diversity among animals in respect to the number and location of their eyes. In mammals, birds, reptiles and fishes they are limited to two and are invariably placed in the head, but others of the animal kingdom may have anywhere up to 50,000, and they seem to have been placed anywhere they might be handy.

The dragon fly possesses eyes composed of an aggregration of about 10,000. In spiders and scorpions there are usually eight or ten eyes in one or more clusters on the dorsal aspect of that part of the body which is formed by the union of the head and thorax. The starfish has an eye on the tip of each of his five rays, or arms, as has the sea urchin, which is homologically nothing but a starfish with the ends of its rays drawn close together in a circle around which is considered the hinder part of his body. The scallop has numerous eyes on the edge of its mantle, extending from one end of the animal to the other, and forming a semi-circle. Some marine worms have eyes in clusters not only on the head but also along each side of the body, even in the tip of the tail, and they are connected individually with the median nerve cord.

In the lowest forms are found many infusoria which have neither eyes nor nerves, but are nevertheless sensitive to light, either seeking or avoiding it.

Largest Power Dam.

The Keokuk dam, which extends across the Mississippi river from Keokuk, Ia., to Hamilton, Ill., is the largest power dam in the world. From the 15 turbine generators propelled by the water which passes over it, electric power is transmitted to St. Louis, 145 miles away, and to smaller cities in Illinois, Iowa, and Missouri. The turbine wheels, one of which weighs 65 tons, or four times as much as any ever before made, will eventually be 30 in number, and together will produce 200,000 horse power.

Portable Oil Refinery.

A Texas man is the inventor of a portable oil refinery mounted on railroad cars that can be readily moved from one oil field to another.